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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,796	05/20/2002	Takaaki Maekawa	2002-0279A	3949

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EXAMINER

NAFF, DAVID M

ART UNIT

PAPER NUMBER

1651

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,796

Applicant(s)

MAEKAWA, TAKAAKI

Examiner

David M. Naff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/20/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claims examined on the merits are 1-3, which are all claims in the application.

Claim Rejections - 35 USC § 112

5 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15 The claims are confusing and unclear by claim 1 claiming the carrier in terms of how the carrier is obtained, and not setting forth clear, distinct and positive process steps for a complete process.

In line 2 of claim 1, the meaning of "element polymer product" is uncertain. How does "element" define the polymer?

20 In line 2 of claim 3, a structure that is a honeycomb structure within the scope of the claim is uncertain since the structure of Fig. 4 that is disclosed in the specification to be a honeycomb structure does not appear to be the structure of a normal honeycomb.

Claim Rejections - 35 USC § 103

25 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was

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made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5 Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11-123076 in view of Japanese Patents 6-207071 and 2-131578 and 5-76365 (all listed on form PTO-1449 of 5/20/02).

10 The claims are drawn to a bacteria growth carrier containing a trace element or a trace element and an inorganic nutrient salt for bacteria growth in a polymeric material laminated with an inorganic porous material.

15 Japanese Patent 11-123076 disclose a carrier for microorganisms that can be an inorganic/organic complex and a material for promoting physiological activity of microorganisms which can be a metal such as copper or zinc.

Japanese Patent 6-207071 discloses a microorganism carrier formed of a gelling material such as polyvinyl alcohol.

20 Japanese patent 2-131578 discloses a carrier for microorganisms composed of inorganic fibers

Japanese Patent 5-76365 discloses a microorganism carrier formed by fusing porous ceramic granules to thermoplastic polymer granules.

25 It would have been obvious to form the microorganism carrier that is an inorganic/organic complex of Japanese Patent 11-123076 by forming the gel of Japanese Patent 6-207071 as a laminate on the carrier composed of inorganic fibers of Japanese patent 2-131578 as suggested by Japanese Patent 5-76365 disclosing fusing porous ceramic

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granules to thermoplastic polymer granules to prepare a microorganism carrier. Forming the gel on the inorganic carrier would have been expected to provide the gel with strength and provide characteristics of both the gel and inorganic carrier together. The carrier of Japanese Patent 2-131578 can have a honeycomb structure, and a honeycomb structure as required by claim 2 would have been obvious. The different shapes of claim 2 would have been merely a matter of obvious choice depending on individual preference for a particular shape.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Naff whose telephone number is 571-272-0920. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David M. Naff
Primary Examiner
Art Unit 1651

DMN
9/17/04